



The Minuteman Repeater Association

The Minuteman

Volume 37, Number 4

March 2008



Membership Meeting ~ 19 March, 7:30 PM Campion Center, 19 Concord Rd, Weston, MA GEMOTO and the Mt. Uncanoonuc Repeater System

GEMOTO is a collection of ham radio operators with an interest in GE and Motorola commercial gear. Recently, several members of this group undertook an ambitious project to build a 6 meter repeater system that spans from Central NH to Massachusetts. Rick Zach, K1RJZ, a GEMOTO founder, will give a presentation on the GEMOTO group and their 6-meter repeater system. Expect to see some examples of converted gear on display. For more information on GEMOTO, visit <http://www.gemoto.com>

Talk in on 146.79

Directions to the MMRA Meeting

From Rt. 128 — Take Rt. 128 to Rt. 20 WEST in Waltham. Take right from Rt. 20 onto Boston Post Road. Take right from Rt. 20 onto Concord Road. The Campion Center is on Concord Road. At the fork in the road, before arriving at the Campion Center, bear left.

From Rt. 20 heading East — Head East on Rt. 20. After entering Weston bear left onto Boston Post Road. From Boston Post Road turn left onto Concord Road. At the fork in the road, before arriving at the Campion Center, bear left.

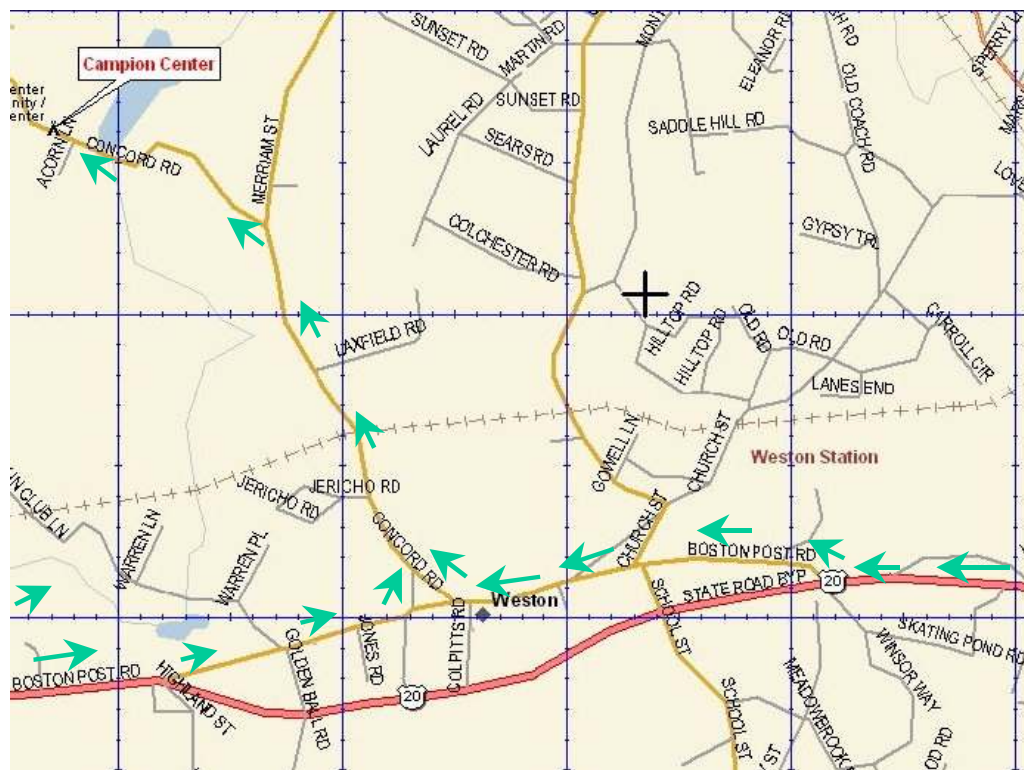


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About the Minuteman Repeater Association

The Minuteman Repeater Association (MMRA) is dedicated to Amateur Radio and public service. The MMRA maintains a large system of repeaters in Eastern Massachusetts.

The MMRA meets (usually) on the 3rd Wednesday of September, November, January, March, and May. Meeting time, locations and talk-in frequency vary. These are announced in the newsletter and on weekly nets. Meetings are open to all interested parties.

The Minuteman newsletter is mailed one week before each meeting. Members are encouraged to submit articles. Articles may be sent to the editor via email to newsletter@mmra.org. The deadline for articles is the last Friday of the month preceding the meeting.

Each Tuesday evening at 8PM the MMRA links most of the repeaters for an open net. The topic is "Technical Information and Other Stuff". Please join us.

Membership in the MMRA is open to all radio amateurs. Annual dues are \$25 per individual or \$35 per family. See our website for details.

Email to the club leadership should be sent to contact@mmra.org. The MMRA maintains a web site at: <http://www.mmra.org/>

An email distribution list for club members named "MMRA" has been established at: <http://www.yahoogroups.com/>

No part of this newsletter can be copied or posted elsewhere without prior approval from the club. Your cooperation in this matter is greatly appreciated.

Repeater and Frequency Information

Location	MHz	PL	Call	Linking	
				To Hub 1	To Hub 2
MMRA Voice Repeaters					
Marlborough	53.810	71.9	W1BRI	PTL	—
Belmont	145.430	67.0	WA1RTT	—	—
Mendon	146.610	146.2	N1BHI	FTL	planned
Quincy	146.670	146.2	W1BRI	PTL	PTL
Stoneham	146.715	146.2	N1NVL	PTL	PTL
Weston	146.790	146.2	N1BE	PTL	planned
Brookline	146.820	146.2	K5TEC	FTL	PTL
Marlborough	147.270	146.2	W1MRA	PTL	PTL
Hopkinton	223.940	103.5	N1BHI	FTL	—
Quincy	224.400	103.5	N1KUG	FTL	PTL
Weston	224.700	103.5	N1NOM	FTL	planned
Marlborough	224.880	103.5	W1MRA	FTL	PTL
Weston	442.700	88.5	N1NOM	Network Hub 2 (PTL to Hub 1 or 448.625)	
Stoneham	446.725	88.5	W1DYJ	FTL	PTL
Southborough	449.575	88.5	W1BRI	FTL	—
Marlborough	449.925	88.5	W1MRA	Network Hub 1 (planned — link to 448.625)	
Affiliated Voice Repeaters					
Bolton	29.620	131.8	W1OJ	PTL to Hub 2 (+ FTL to 448.625)	
Norwell	145.250	77.0	AC1M	PTL	PTL
Coventry RI	145.370	67.0	N1JBC	PTL	—
Norwell	443.600	88.5	NS1N	PTL	PTL
Princeton	448.625	88.5	W1OJ	PTL to Hub 2 (+ FTL to 29.620)	
Milford	446.825	100.0	WA1QGU	PTL to 53.810	
Brookline	447.875	136.5	K1IW	FTL	PTL
MMRA “Other” Systems					
Marlborough	144.390	none	W1MRA	APRS Digipeater	
???	145.630	146.2	W1MRA	Fox Box	
Internet	Echolink node 94940				
	IRLP node 4133				

Notes: FTL = Full Time Linked (usually to Hub 1)
PTL = Part Time Linked (on schedule or demand)
Note — a repeater can be linked to only one Hub at a time.

PL: PL is required to prevent interference. The code **750** will temporarily disable the MMRA PL on the 2M repeaters.

Autopatch: Only the Hub 1 has a telephone line. Link to Hub 1 if necessary, then bring up the autopatch using the 449.925 autopatch codes.

Control codes are sent to members upon receipt of dues.

See Page ??? for information about linking.

MMRA February Board of Directors Meeting

Bob DeMattia, K1IW — President

The board meeting began at 7:30pm. Bob DeMattia K1IW, Kevin Paetzold K1KWP, Roger Coulson WA1NVC, and Steve Schwarm W3EVE were in attendance.

K1KWP presented the treasurer's report. The club is close to on par with last year. One item of note is the increase in bank fees - now running \$20 per month. K1IW made the motion that K1KWP find a new bank, which was unanimously passed.

Membership is currently at 194 members. There were 31 unexplained non-renewals from last year, which is about average.

The board reviewed the current status of the MMRA's repeaters:

- STO - all is good
- QCY - 222 amplifier is not working
- WES - 222 amplifier is under driven
- BRK - 2m receiver is not working correctly
- SBO - is not decoding DTMF
- MRE - TX to RX link transmitter is drifting; in-

termittent audio on HUB link receiver

MDN - Needs HUB2 upgrade

HOP - all is good

MRW - lower 6m antenna needs replacing, battery charger needs updating, '925 PA is still intermittent, 224.88 needs its audio circuits reviewed (DTMF doesn't decode properly).

MMRA's participation in Boxboro was reviewed:

We will have the same setup as in past years, and will be providing talk-in.

K1IW to pick raffle prizes totalling 200-250 dollars.

W1BRI to create a new MMRA photo slide show.

K1KWP/W1DYJ to develop special edition of newsletter.

K1KWP will handle the foxbox.

Raffle tickets will be 1/\$1, 6/\$5, 14/\$10.

MMRA will also rent a fleamarket space for an unattended display.

The board meeting closed at 9:30pm.

Antenna Work at Weston Hub 2 in December

Bryan Cerqua — W1BRI

(This should have been in the last Newsletter — Editor.)

New antennas were installed on HUB2 main repeater and link radio.



Bryan in his glory!

After spending about three frustrating hours trying to get the 7/8" hardline up the shaft that runs up the six floors within the building we could not get it by the last leg where there as a right angle turn near the floor below the roof. We ended up using the hardline that was on the corner reflector. The corner reflector was removed since it was not being used. We did however get a run of 9913 coax up the shaft for the new link antenna. A 5dB Antennex stick was used on HUB2 and coverage is greatly improved. This antenna was originally used on Shrewsbury

449.575. For the HUB2 link radio a small 5 element beam was mounted on the tower about 7 feet off the roof to hit HUB1 and Mt Wachusett. This link antenna is used to connect HUB2 to HUB1 as well as Mt Wachusett 448.625 (W1OJ 10 Meter System.)

Thanks go to the crew, Nat NG1Z, Bob K1IW and W1BRI



The Link Antenna

The Antennex Stick



Nat, NG1Z

Update on Stoneham 440

Larry Banks — W1DYJ

As we all know, the antenna at Stoneham 440 was changed from a vertical to a corner reflector pointing AWAY from Cape Cod because of the interference it was causing to the PAVE PAWS radar station in Sandwich. Here is an update from the ARRL.

The ARRL Letter
Vol. 27, No. 8
February 29, 2008

==> ARRL, FCC, DEPARTMENT OF DEFENSE REVIEW NEW DEVELOPMENTS IN PAVE PAWS INTERFERENCE MITIGATION

The FCC, ARRL representatives and agents of the various US Air Force units working on developing a plan to mitigate alleged interference from 70 cm ham radio repeaters to PAVE PAWS radar systems on both coasts met February 20 via conference call. The purpose of the conference was to review the status of the mitigation plans at both sites: the Massachusetts Military Reservation on Cape Cod and Beale AFB, north of Sacramento, California.

Thanks to the cooperation and assistance of the involved repeater owners on Cape Cod, ARRL Regulatory Branch Manager Dan Henderson, N1ND, said, "I am pleased to be able to pass along that at this time, the Department of Defense has determined that the levels of harmful interference to the PAVE PAWS radar site on Cape Cod have been sufficiently reduced. As part of this determination, they are not rescheduling additional follow-up testing for that area until sometime in 2009."

Henderson said that this decision doesn't mean New England is back to pre-mitigation repeater operation: "Any mitigation steps that have been taken should remain in place. A repeater that has gone off the air should not be simply turned back on at its original power level - its previously determined mitigation standard still applies in order to protect the primary user from harmful interference."

Henderson stressed that the entire process is ongoing. "The high degree of voluntary cooperation shown by the owners of Air Force-identified repeaters has helped demonstrate to the DoD that the amateur community takes its responsibility seriously. This should help us retain access to the band in the long run."

During the discussion of the Cape Cod radar during the teleconference, the ARRL broached the topic of allowing the resumption of coordinating new repeaters on the 70 cm band in New England. The Air Force has agreed in principle to allow the New England Spectrum Management Council (NESMC) to resume coordination efforts under certain conditions. "These include that in addition to NESMC's normal coordination policies, Longley-Rice signal strength plots are prepared to determine expected signal strength at the radar site," Henderson said.

Henderson said that the ARRL has a "fairly good understanding of what strength level at the site should be workable, even though the DoD has not given us specific information on the sensitivity of the radar. The Longley-Rice plots should indicate if the operating parameters of the proposed repeater might be sufficient to prevent harmful interference to the radar site. The Longley-Rice plots are not the 'last word' in the process, but are a good tool giving the repeater owner and NESMC a reasonable assessment of possible problems."

Henderson reiterated that "any specific mitigation number from the Air Force is an exact measurement, not a 'predicted' number from a computer analysis."

Once NESMC approves a tentative coordination, Henderson explained that NESMC would forward the complete information on the new repeater to the Air Force for authorization on a case-by-case basis, as provided for in Title 47 §2.106 Footnote US7. "During a 60 day trial period, the Air Force would contact NESMC for an immediate shut-down of a new repeater causing harmful interference. If that happens the new repeater would have to remain off the air until it can be successfully mitigated."

While this new process is a bit burdensome to NESMC and the repeater owners, it goes a long way toward keeping Amateur Radio in a position where 70 cm operation can grow with careful attention to the effect of our operations on the primary users.

Notes on the Membership Meeting of 10 January 2008

WA1JXR, Greg Algieri ~ Antenna Analyzers

Larry Banks — W1DYL

Greg, WA1JXR, gave us a really good overview of what Antenna Analyzers can do for us in our constant quest for better antennas and feed lines. They can do a LOT MORE that just give us an SWR reading!

This was a joint meeting with the Algonquin Amateur Radio Club, and we expect to have a joint meeting with the AARC group in the future.

Here are some highlights from the meeting — if you were not there, you really should think about attending future meetings.



Before the meeting...

More before the meeting...

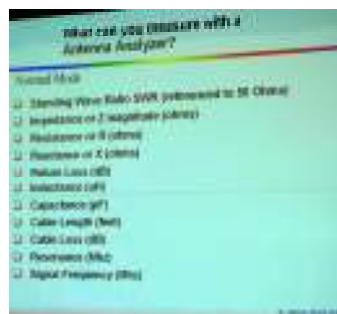
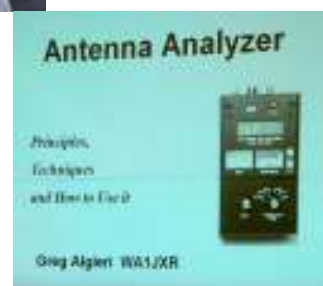


Ed, K1DIN, President of the AARC making his introductory remarks...



Greg, WA1JXR, introducing himself...

The Talk!



What can an Antenna Analyzer do — more than you realize...

What IS an Antenna Analyzer???



Greg describing how the basic analyzer works.

The Amateur's Code

The Radio Amateur is:

CONSIDERATE...never knowingly operates in such a way as to lessen the pleasure of others.

LOYAL...offers loyalty, encouragement and support to other amateurs, local clubs, and the American Radio Relay League, through which Amateur Radio in the United States is represented nationally and internationally.

PROGRESSIVE...with knowledge abreast of science, a well-built and efficient station and operation above reproach.

FRIENDLY...slow and patient operating when requested; friendly advice and counsel to the beginner; kindly assistance, cooperation and consideration for the interests of others. These are the hallmarks of the amateur spirit.

BALANCED...radio is an avocation, never interfering with duties owed to family, job, school or community.

PATRIOTIC...station and skill always ready for service to country and community.

Paul M. Segal, W9EEA, 1928

Treasurer's Report Kevin Paetzold, K1KWP

Income	Dues	\$3854.71
	Donations	524.06
	Misc.	507.03
	Future Dues	100.00
	Total	\$4985.80

Number of members renewed to date = 162
Number not yet renewed = 22

Expenses	Spent to date	\$2681.66
	Known expenses	406.41
	Total	\$3088.07

President's Message Bob DeMattia, K1IW

March is the time of year when we begin the nomination process for next year's officers. Every year, this is a pretty mundane affair and the same board is reelected. While I appreciate the vote of confidence from the membership, it would be nice to see some "new blood" take the reigns occasionally.

This year is a prime opportunity - our club secretary and one of the director's have already announced they will not be seeking another term.

If you're interested in taking a more active part in the club, we need you!

Club officers take on the duties of keeping the club operating efficiently by processing and tracking memberships, and decided maintenance issues. They also help set the direction of the club in the future.

If you think you or someone you know would make a good officer, please let the nomination committee know by sending the name to contact@mmra.org.

I'm looking forward to hearing from you.

73,
Bob

Upcoming MMRA Meetings

All meetings start at 7:30 unless otherwise noted.

Date	Location	Feature
Sep 19 7 PM	Westborough Library	Solar Powered Stations, Phil, N1XTB
Oct 17	Stratus Computer	Board Meeting
Nov 14	MEMA	Wide Area Amateur Radio Network, Bob, N1KMA
Dec 19	K1IW Home QTH	Board Meeting
Jan 10	Marlborough MS	Joint meeting with AARC
Feb 20	Chin's Garden Restaurant	Board Meeting
Mar 19	Campion Center, Weston	GEMOTO and the Mt. Uncanoonuc Repeater System, Rick, K1RJZ
Apr 16	TBD	Board Meeting
May 21	Clay Center Observatory, Brookline	Astronomy Night and General Elections

MMRA Leaders

President	Bob DeMattia	K1IW
Vice President	Steve Telsey	N1BDA
Secretary	John McGovern	W1JMC
Treasurer	Kevin Paetzold	K1KWP
Clerk	Bob Evans	N1BE
Technical Officer	Bryan Cerqua	W1BRI
Director 2006-08	Clark Conti	N1NVK
Director 2006-08	Bill Hanrahan	W1WH
Director 2007-09	Steve Schwarm	W3EVE
Director 2007-09	Roger Coulson	WA1NVC
Emergency Coordinator	open	
Net Manager	Larry Banks	W1DYJ
Newsletter Editor	Larry Banks	W1DYJ
Public Service Coordinator	Bruce Pigott	KC1US
VEC Liaison	Bill Wade	K1IJ
Web Page Editor	Bob DeMattia	K1IW

Don't Forget!

Every Tuesday @ 8 PM
Technical, Informational
and Other Stuff Net

The MMRA's repeaters are linked Tuesday nights for the TIAOS Net. Join us! This is a good way to keep up with what is happening in the MMRA and ask your ham related questions.

If you would like to tray your hand at Net Control contact me at W1DYJ@mmra.org – we have a script you can use to start with. This is good practice for a number of ham related operations, from emergency preparedness to contesting.

Current Net Control Operators:

Week 1	WA1JIM	Jimmy Devaire
Week 2	W1EUJ	Dave Goncalves
Week 3	W1DYJ	Larry Banks
Week 4	K1KWP	Kevin Paetzold
Week 5	W1DYJ	Larry Banks

Newsletter Delivery

If you received this via US Mail, you might want to think about having it sent by eMail. You will receive it earlier, it will be in color, it may have MORE great content, and it will save the MMRA \$\$\$! Send your request to W1JMC@mmra.org.

Past Newsletters are available at <http://www.mmra.org/>

MMRA VE Sessions

3rd Saturday of each Month
 9 AM at the
 Marlboro Public Library
Contact: Bill Wade, K1IJ
 781-891-9079

Evenings 6 to 10 PM,
 Weekends 8 AM to 10 PM.

Accredited by the ARRL VEC



Membership Meeting ~ 19 March, 7:30 PM
Campion Center, Weston, MA

GEMOTO and the Mt. Uncanoonuc Repeater System

Talk in on 146.79

Calendar of Ham Radio Events

Public Service Events

See this web site for contact information

<http://purl.org/hamradio/publicservice/nediv>

Apr 5 Newton MA Multiple Sclerosis Journey
Apr 13 Boston MA Multiple Sclerosis Walk
Apr 19 Townsend MA Squannacook Canoe Race
Apr 20 Boston MA Women's Olympic Marathon Trial
Apr 21 Hopkinton MA Boston Marathon Start
Apr 21 Hopkinton MA Boston Marathon Route/1st Aid
Apr 21 Boston MA Boston Marathon Finish
Apr 27 Groton MA Groton Road Race
Apr 27 Needham MA Run of the Charles Canoe Race
May 4 Boston MA Walk for Hunger
May 18 Devens MA Parker Classic Road Race
Jun 8 Boston MA Bikes Not Bombs Bike Ride

New England Area Ham - Electronic Flea Markets

See this web site for contact information

<http://mit.edu/w1gsl/Public/ne-fleas>

29 Mar Windsor CT VR+C Mus 115 Pierson
30 Mar Southington CT SARA @ HS
30 Mar Henniker NH CVRC @ Comm Sch
5 Apr Londonderry NH IRS @ Lions
6 Apr Framingham MA FARA @ Keefe Sch
13 Apr LaGrangeville NY MtBARC @T ymorePk
19 Apr Manchester NH NEAntqRC @ Bingo Ctr
19 Apr S Portland ME PAWA @ AM Legion
26 Apr Middletown NY OCARC @ Wallkill Comm Ctr
27 Apr Lindenhurst NY GSBARC @ Fire Mm Pk
2,3 May Deerfield NH NearFest @ FG
10 May Rensselaer NY EGARA @ Fire Co
24 May Vernon CT NARC @ Tolland Ag Ctr

THE MINUTEMAN REPEATER ASSOCIATION

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WE'RE ON THE WEB
[HTTP://WWW.MMRA.ORG/](http://www.mmra.org/)
